

## CLAIMS:

1. A high-pressure discharge lamp, at least
  - with a burner (2) which has a burner wall (25) and a discharge chamber (21) enclosed by said burner wall (25), wherein a region with a lowest temperature and a region with a highest temperature establish themselves at the inner and the outer contour of the burner wall (25), respectively, during operation of the lamp and in dependence on the mounting position of the lamp,
  - and with a multilayer interference filter (3) which is provided on a portion of the outer contour of the burner wall (25), which interference filter (3) reflects towards the discharge chamber (21) mainly light in that wavelength range of the IR light that has a causal relationship to the maximum emissive power of the material of the burner wall (25).
2. A high-pressure discharge lamp as claimed in claim 1, characterized in that a layer (3.1) with a higher refractive index and a layer (3.2) with a lower refractive index occur in alternation in the layer structure of the multilayer interference filter (3).
3. A high-pressure discharge lamp as claimed in claim 2, characterized in that the layer (3.2) of the interference filter (3) having the lower refractive index preferably comprises predominantly  $\text{SiO}_2$ , and the second layer (3.1) of the interference filter (3) is made of a material having a higher refractive index than  $\text{SiO}_2$ , preferably predominantly zirconium oxide ( $\text{ZrO}_2$ ).
4. A high-pressure discharge lamp as claimed in claim 3, characterized in that the second layer (3.1) is made of a material chosen from the group of titanium oxide, tantalum oxide, niobium oxide, hafnium oxide, silicon nitride, particularly preferably zirconium oxide,  $\text{ZrO}_2$ , or a mixture of these materials.

5. A high-pressure discharge lamp as claimed in claim 1, characterized in that the interference filter (3) is arranged in that location or at least in that location where the region of lowest temperature establishes itself at the outer contour of the burner wall (25).

5 6. A high-pressure discharge lamp as claimed in claim 1, characterized in that the interference filter (3) is arranged not in that location where the region of lowest temperature establishes itself at the outer contour of the burner wall (25).

7. A high-pressure discharge lamp as claimed in claim 1, characterized in that the  
10 high-pressure gas discharge lamp is a UHP lamp.

8. A high-pressure discharge lamp as claimed in claim 7, characterized in that the material of the burner wall (25) is made in particular of quartz, and accordingly the interference filter (3) is capable of reflecting mainly IR light in the wavelength range from 2  
15  $\mu\text{m}$  to 5  $\mu\text{m}$ .

9. A lighting unit comprising at least a lamp as claimed in any one of the claims 1 to 8.

20 10. A projection system comprising at least a lamp as claimed in any one of the claims 1 to 8.